

DESCRIPTION AND RATING

CATHODE-RAY TUBE 5QP4

5-INCH ROUND, GLASS

DEFLECTION - MAGNETIC

FOCUS - MAGNETIC

FACEPLATE - CLEAR, METAL BACKED

The 5QP4 is a magnetic-focus and magnetic-deflection direct-view cathode-ray tube for industrial applications. A feature of this tube is a reflective metal-backed screen which reduces undesirable screen charging and increases high-light brightness.

TECHNICAL INFORMATION

GENERAL

Electrical

Heater Voltage	6.3	Volts
Heater Current	$0.6 \pm 10\%$	Ampere
Focusing Method - Magnetic		
Deflecting Method - Magnetic		
Deflecting Angle, approximate	53	Degrees
Phosphor - P4, Sulfide Type		
Fluorescence - White		
Persistence - Short		
Faceplate - Clear		
Direct Interelectrode Capacitances, approximate		
Cathode to All Other Electrodes	5	uuf
Grid-No. 1 to All Other Electrodes	6	uuf

Mechanical

Over-all Length	$11 \frac{1}{8} \pm \frac{3}{8}$	Inches
Greatest Diameter of Bulb	$4 \frac{15}{16} \pm \frac{3}{32}$	Inches
Minimum Useful Screen Diameter	$4 \frac{1}{4}$	Inches
Anode Contact - Recessed Small-ball Cap, J1-22		
Base - Long Medium-shell Octal 8-pin, B8-65		
Basing - 5AN		
Base Pin Connections		
Pin 1 - No Connection	Pin 5 - Grid-No. 1	
Pin 2 - Heater	Pin 6 - No Connection	
Pin 3 - Grid-No. 2	Pin 7 - Cathode	
Pin 4 - No Connection	Pin 8 - Heater	
Anode Contact Alignment		
Anode Contact Aligns With Pin-No. 5 \pm 5 Degrees		
Net Weight, approximate	1.5	Pounds

MAXIMUM RATINGS Design Center Values

Anode Voltage	12000 Max	Volts D-c
Grid-No. 2 Voltage	410 Max	Volts D-c
Grid-No. 1 Voltage		
Negative-bias Value	125 Max	Volts D-c
Positive-bias Value*	0 Max	Volts D-c
Positive-peak Value	2 Max	Volts

GENERAL  ELECTRIC

MAXIMUM RATINGS Design Center Values

Peak Heater-cathode Voltage†		
Heater Negative with Respect to Cathode		
During Warm-up Period Not to Exceed 15 Seconds	410 Max	Volts D-c
After Equipment Warm-up Period	125 Max	Volts D-c
Heater Positive with Respect to Cathode	125 Max	Volts D-c

JETEC COMPARATIVE CONDITIONS

Anode Voltage	12000	Volts
Grid-No. 2 Voltage	300	Volts
Grid-No. 1 Voltage‡	-28 to -72	Volts
Focusing-coil Current, approximate§	150	Milliamperes

RECOMMENDED OPERATING CONDITIONS

Anode Voltage◇ (Average Brightness = 20 Foot-Lamberts)	10000	Volts
Grid-No. 2 Voltage	300	Volts
Grid-No. 1 Voltage‡	-28 to -72	Volts
Focusing-coil Current (RTMA Coil No. 106 at 2 3/4 Inches), approximate	137	Milliamperes

MAXIMUM CIRCUIT VALUES

Grid-No. 1 Circuit Resistance	1.5 Max Megohms
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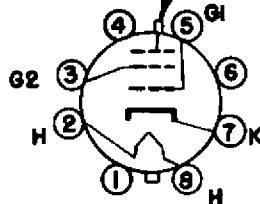
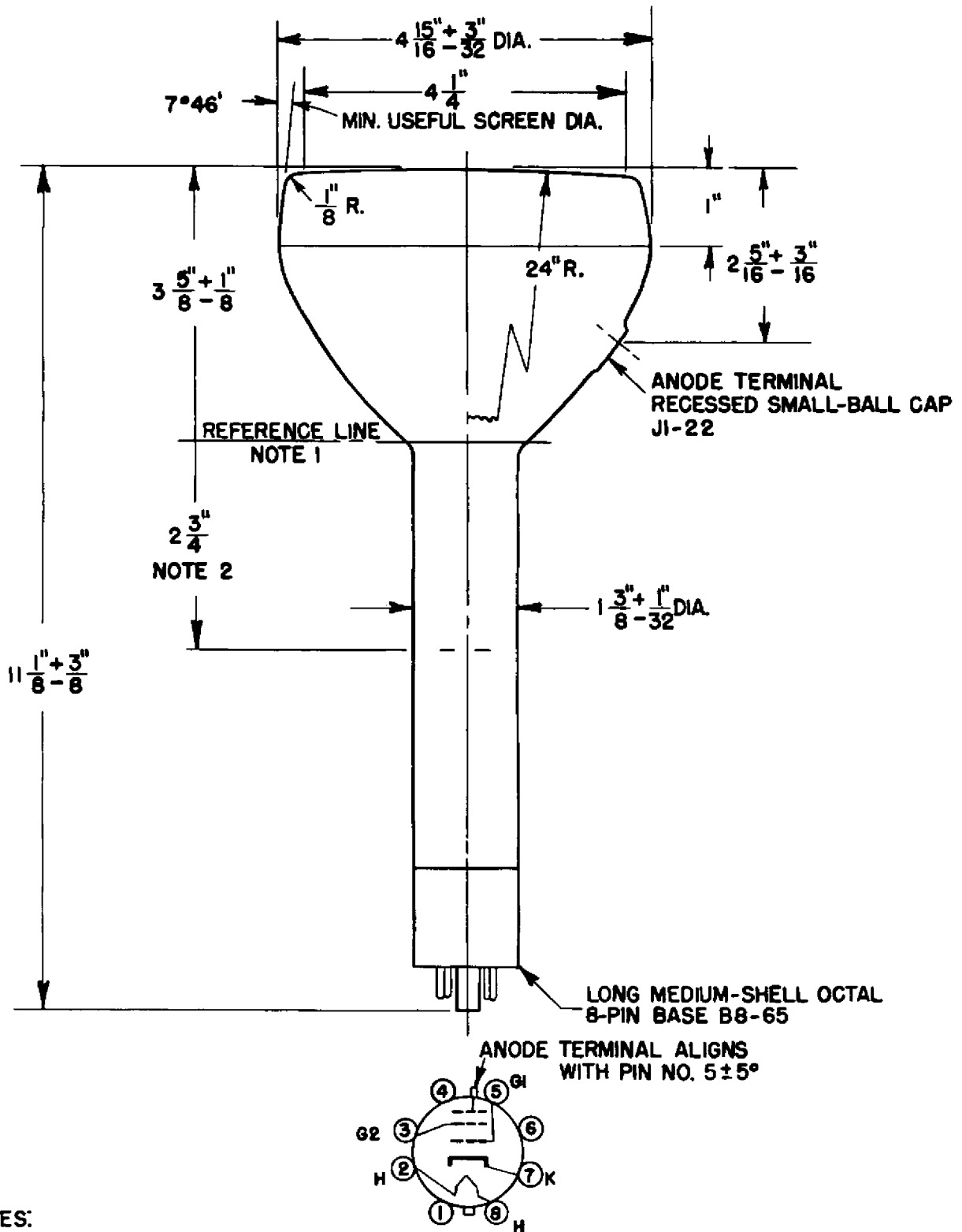
* At or near this rating, the effective resistance of the anode supply should be adequate to limit the anode input power to 6 watts.

† Cathode should be returned to one side or to the midtap of the heater transformer winding.

‡ For visual extinction of undeflected focused spot.

§ For RTMA focusing coil No. 106 or equivalent, with the combined grid-No. 1 bias voltage and video-signal voltage adjusted to produce a high-light brightness of 20 foot-lamberts on a 2 7/8- by 3 7/8-inch picture area and with the distance from the reference line to center of air gap equal to 2 3/4 inches.

◇ Brilliance and definition decrease with decreasing anode voltage. In general the anode voltage should not be less than 5000 volts.



NOTES:

1. REFERENCE LINE IS DETERMINED BY THE PLANE OF THE UPPER EDGE OF GAGE 1.430" $\begin{matrix} +.003" \\ -.000" \end{matrix}$ ID AND 2" LONG WHEN THE GAGE IS RESTING ON THE BULB.
2. RECOMMENDED POSITION FOR CENTER OF FOCUSING FIELD.

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5QP4
Outline

GENERAL  ELECTRIC
ELECTRONICS DIVISION, TUBE DEPARTMENT
SCHENECTADY, NEW YORK